

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Snap-On Tools Inc

Iowa Center for Industrial Research and Service

Snap-On Tools, Inc. Reduces Defects and Reduces Costs

Client Profile:

Snap-on Tools, Inc., manufactures custom-made rolling tool cabinets for industrial and automotive use. The company employs 500 people at its facility in Algona, Iowa.

Situation:

Snap-on Tools wanted to pursue opportunities for reducing the number of defects in their industrial tool boxes caused by dents and scratches during the manufacturing process. The rework cost was causing a significant impact to the cost of the product. The company contacted the Iowa Center for Industrial Research and Service (CIRAS), a NIST MEP network affiliate, for help.

Solution:

CIRAS brought in a senior Industrial Engineering student team from Iowa State University to work with the Snap-On Tools plant management to assess the situation and offer solutions. This arrangement was a partnership where the students were given the opportunity for a real hands-on project to solve. The student engineering team developed a fishbone diagram to determine the causes of the defects, and a Pareto chart assisted to identify the frequencies of defects. From this analysis, a weighted criteria matrix was used to evaluate potential solutions for implementation. The solutions offered for reducing scratches and dents were all material handling issues of completed components for assembly. Items that were dented needed more room for movement and different moving processes plus training employees on being more attentive to not hitting finished parts or painted parts -- attention to detail. Although this wasn't a difficult assignment, the amount of rework was significant.

Results:

* Realized \$250,000 in cost savings.

Testimonial:

"Having the opportunity to work with the engineering students gave the company an opportunity to provide an educational experience for the student engineers, and student engineers provided a new set of eyes to find real solutions for improvements for Snap-on Tools."

Scott Marienau, Plant Manager